

REMARKS/ARGUMENTS

This Amendment is in response to the Office Action dated February 25, 2005. This Amendment is being provided within the period for response extending to May 25, 2005.

5 Claims 1 and 7 are currently amended.

 Claim 2 is cancelled.

 Claims 9-14 are new.

 Claims 1 and 3-14 remain pending following entry of this Amendment.

10 **Rejections under 35 U.S.C. § 102**

 Claims 1, 2, 7, and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by Mountsier et al. ("Mountsier" hereafter) (U.S. Patent No. 5,810,933). These rejections are respectfully traversed.

 Claim 1 has been amended to incorporate claim 2, thus further clarifying in claim
15 1 that the planar electrode extends beyond the cooling gas channel. According to claim 1, the cooling gas channel is formed within an outer peripheral edge of the planar electrode. More specifically, claim 1 requires that the planar electrode be positioned within the ceramic disc and extend beneath and beyond the cooling gas channel.

 As discussed in the specification, the region beyond the outer peripheral edge of
20 the cooling gas channel that overlies the planar electrode is referred to as the gas-sealed region. The planar electrode within the gas-sealed region functions to pull the wafer toward the ceramic disc in the gas-sealed region, thus providing a more effective seal between the wafer and the ceramic disc. A more effective seal in the gas-sealed region serves to improve prevention of cooling gas leakage from the cooling gas channel to the
25 wafer processing environment. Prevention of cooling gas leakage serves to improve a

cooling condition of the wafer, thus improving wafer processing characteristics such as center-to-edge uniformity as measured across the wafer.

The Office has asserted that Mountsier teaches a cooling gas channel formed on a top surface of a ceramic disc, over an electrode within the ceramic disc, and within an outer peripheral edge of the electrode within the ceramic disc. The Applicants respectfully disagree with the Office's assertion regarding the teaching of Mountsier. The Office refers to column 4, lines 30-32, of Mountsier to provide the teachings that the cooling gas channel is formed on a top surface of a ceramic disc, over an electrode within the ceramic disc, and within an outer peripheral edge of the electrode within the ceramic disc. Column 4, lines 30-32, of Mountsier state the following:

"Techniques for manufacturing ceramic disk 52 and the electrode(s) formed within ceramic disk 52 are well known to those skilled in the art, as is the use of wafer lift pins."

The cited portion of Mountsier simply states that manufacturing of the ceramic disk and the electrodes within the ceramic disk is known to those skilled in the art. Thus, the cited portion of Mountsier does not constitute a teaching of anything. Simply making a statement that a feature of a claim is known to those skilled in the art, either explicitly or by reference to such a statement, is essentially equivalent to taking official notice. Therefore, the Applicants hereby traverse the Office's assertion of official notice with regard to an electrostatic chuck including a cooling gas channel formed on a top surface of a ceramic disc, over an electrode within the ceramic disc, and within an outer peripheral edge of the electrode within the ceramic disc. The Applicants request that the Office provide specific factual findings and concrete evidence in the record to support these findings with regard to the Office's position of official notice as discussed above.

With respect to claim 2, which is now incorporated into claim 1, the Office has asserted that Figure 5 of Mountsier teaches that the planar electrode extends beyond the

cooling gas channel. Figure 5 of Mountsier shows cooling channels 68 defined within the ceramic disc 52. However, Figure 5 of Mountsier does not show anything related to planar electrodes. Therefore, it is not possible that Figure 5 of Mountsier teaches the planar electrode extending beyond the cooling gas channel, as recited in claim 1.

5 Nevertheless, the Applicants have amended claim 1 to more clearly recite that the cooling gas channel defines an inner boundary of a gas-sealed region at a periphery of the ceramic disc. In view of this clarifying amendment to claim 1, the cooling gas channels 68 in Figure 5 of Mountsier cannot be construed as teaching the cooling gas channel of claim 1. More specifically, the gas-sealed region at the periphery of ceramic disc 52 is not
10 shown in Figure 5 of Mountsier, thus it is not possible to identify a relationship between the cooling channels 68 in Figure 5 of Mountsier and the gas-sealed region at the periphery of the ceramic disc.

Mountsier does teach an annular cooling gas channel 74' in Figure 18. However, the annular cooling gas channel 74' of Mountsier is defined outside the outer peripheral
15 edge of electrodes 95 and 95'. Thus, Mountsier does not teach at least the following feature of claim 1 as-amended:

"a cooling gas channel formed on a top surface of said ceramic disc over said electrode and within an outer peripheral edge of said electrode, the cooling gas channel defining an inner boundary of a gas-sealed region at a periphery of the
20 ceramic disc,

wherein said planar electrode extends beyond said cooling gas channel."

For a claim to be anticipated by a reference under 35 U.S.C. §102, the reference must teach each and every feature of the claim. As discussed above, Mountsier fails to teach each and every feature of claim 1 as-amended. Therefore, the Applicants submit
25 that claim 1 is patentable over the cited art of record. Additionally, because each of claims 3-6 ultimately depends from claim 1, the Applicants submit that each of claims 3-

6 is patentable for at least the same reasons provided for claim 1. The Office is respectfully requested to withdraw the rejections of claims 1 and 3-6.

The Office has rejected claim 7 based on the same teachings of Mountsier as used to reject similar features of claim 1, as discussed above. Therefore, the arguments presented above with respect to claim 1 are equally applicable to similar features of claim 7. Additionally, claim 7 has been amended to clarify that the cooling gas channel formed on the second disc-shaped ceramic material compact defines an inner boundary of a gas-sealed region at a periphery of the second disc-shaped ceramic material compact. Also, claim 7 has been amended to clarify that planar electrode extends beyond the cooling gas channel in the laminate.

For the above reasons, Mountsier fails to teach each and every feature of claim 7 as-amended. Therefore, the Applicants submit that claim 7 is patentable over the cited art of record. Additionally, because claims 8 depends from claim 7, the Applicants submit that claims 8 is patentable for at least the same reasons provided for claim 7. The Office is respectfully requested to withdraw the rejections of claims 7-8.

Rejections under 35 U.S.C. § 103

Claims 3-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Mountsier in view of Molslehi (U.S. Patent No. 5,400,209). These rejections are respectfully traversed.

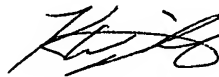
Because each of claims 3-6 ultimately depends from claim 1, the Applicants submit that each of claims 3-6 is patentable for at least the same reasons provided for claim 1. Therefore, the Office is respectfully requested to withdraw the rejections of claims 3-6.

New Claims

Please note that claims 9-14 have been added in this amendment. The Applicants submit that claims 9-14 are patentable over the cited art of record.

In view of the foregoing, the Applicants kindly request that the Office withdraw the rejections of claims 1 and 3-8. The Applicants submit that all of the pending claims (claims 1 and 3-14) are in condition for allowance. Therefore, a notice of allowance is requested. If the Examiner has any questions concerning the present Amendment, the Examiner is kindly requested to contact the undersigned at (408) 774-6914. Also, if any additional fees are due in connection with filing this Amendment, the Commissioner is authorized to charge Deposit Account No. 50-0805 (Order No. LAM2P322). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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